Analysis and Recommended Changes to the Department of Ecology "General Permit" (2011 Aquatic Plant and Algae Management General Permit) and Permitting Process

Submitted by Monica Harle
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Haven Lake is located in rural Mason County. It is a "water of the state." It is extremely clear and healthy, and is an important Coho salmon rearing and spawning habitat. I live at Haven Lake. In the Summer of 2008, Diquat, an aquatic herbicide, was applied to the lake to kill a relatively small number of native plants. Since that time, I have been studying the science about the use of such chemicals for such purposes. I have learned a great deal, and have written a draft Integrated Aquatic Vegetation Management Plan, as suggested by the Washington State Department of Ecology, using its recommended format.

During this process, I discovered many difficulties and challenges with the DOE processes having to do with permitting such chemical applications.

In 2006, the Washington State Department of Ecology DOE formulated its "Aquatic Plant and Algae Management General Permit," in part by combining both noxious weed and native plant control permits into one "general permit" with the intent to streamline the process for approving and issuing permits for the use of aquatic herbicides in Washington State lakes.

Critical loopholes, gaps in protection and oversight problems currently exist in the entire permitting process, in the monitoring of actual chemical applications to lakes , and in inspection criteria of those chemical applications by DOE and the Dept of Agriculture. Based on investigation and communication with stakeholders such as Washington Department of Fish & Wildlife, Mason County planners and prosecutors, the Skokomish Tribe, state legislative representatives, Haven Lake property owners, and property owners on other lakes in Mason and Kitsap Counties, it is my opinion that important parts of the permitting

process, as of 2006 contain serious flaws resulting in unfortunate environmental and legal consequences.

Ecology's water quality department has acknowledged that "the General Permit is a compromise. This "compromise" has adversely impacted Washington State property owners, affected counties and other government agencies, and by removing native habitat, will adversely impact salmon recovery efforts. At Haven Lake, alone, over $116,000 has been spent on Salmon Recovery since the 1990's.

The Department of Ecology's permitting process specifically requires that applicants also comply with all local ordinances that apply, but if the applicant says there are no such ordinances, there is no process to check that information. In the case of Haven Lake, and other Mason County waters of the state, Mason County regulations and ordinances, in place well before 2006, prohibit chemical usage in Mason County lakes for the control of native plants.

First, the County's Shoreline Management Plan requires a Conditional Use Permit for any use of chemicals in waters of the state. If the use is not directed at noxious aquatic weeds, it also requires a Substantial Development Permit. Second, the County's Fish and Wildlife Habitat Conservation Area ordinance requires a Habitat Management Plan for chemical applications in qualifying lakes such as Haven Lake, and specifically prohibits chemical application unless used for control of invasive or noxious species only. Third, the Wetlands ordinance also requires a Mason Environmental Plan for the application of chemicals to anything but noxious weeds.

Any review of the criteria for approval of any of these permits or plans shows why the application of chemicals to Haven Lake for the control of native species of plants could never be approved. Failure to secure the proper permit and plan approvals means that any application of Diquat to Haven Lake constitutes both criminal and civil law violations, according to the Mason County prosecuting attorney's office.

The Washington Department of Fish & Wildlife does not support chemical treatment of lakes for native plants. The Skokomish Tribe, with treaty rights to the Hood Canal Watershed, does not support the

use of chemicals in Haven Lake specifically, and other lakes for native plants. Haven Lake property owners, many of whom use the lake for domestic water supply, spoke out against the use of chemical herbicides for controlling the relatively small amount of native plants found in the lake.

These groups were left out of the permitting process in 2006, a process which resulted in one chemical application to Haven Lake in 2008, which we now know was both a criminal and civil violation in Mason County. This permitting process also has resulted in a 5-year "renewable for life" permit to use chemical herbicides to control native plants in Haven Lake. This process now prohibits the original "sponsoring organization" from even cancelling the permit, itself, without written permission of the chemical applicator.

Now, in 2010 as the "General Permit" is being rewritten to become the next 5 year permit, I believe the entire permitting procedure and oversight rules must be reevaluated and corrected in the 2011 "General Permit". There are 5 topics which I have identified which need to be addressed and are listed below. These are explained in greater detail starting on page 5 of this report.

These changes will benefit <u>all</u> Washington State Lake systems in all counties, although the information originated out of legal and environmental concerns identified with Haven Lake and Mason County.

These recommendations come with the understanding that applying chemicals to a lake system may be part of the tools and strategies occasionally used by the DOE and WDFW to manage some ecosystems, but the approval and permitting process needs to have greater checks and balances to be implemented most appropriately.

Five Recommended Changes within the 2011 "General Permit"

1) **Transparency of process; Integrating appropriate stakeholders**

2) **Redesigned SEPA Environmental checklist specific to chemical applications in lakes**

3) **Addressing Chemical Drift; Chemical Label Information; Monitoring Responsibilities**

4) **Revoking of Coverage; Beneficial Uses protected by law; Unintended Impacts and Effectiveness of Antidegradation Policy;**

5) **Oversight and Inspection Issues; "The Honor System"; Three different definitions by three agencies of "legal chemical applications" for the same body of water. (see pg 14)**

Mason County and legal concerns:

Legal and environmental issues now exist related to Mason County regulations as they apply to Haven Lake, due to the 2006 permitting process for coverage under the "General Permit". Similar legal and environmental concerns and problems such as these can potentially happen to any lake community in any county under the current 2006 "General Permit" conditions.

a. The DOE we believe granted the permit based on incomplete and incorrect information.

b. The herbicide application was in direct violation of Mason County ordinances.

c. No permits were issued, or sought from Mason County.

d. The chemical application exceeded the area approved through drift.

e. The chemical persisted much longer in the lake than anticipated, affecting potable water supplies.

f. The herbicide was applied to a protected lake wetland habitat in direct conflict with the Washington State Critical Areas Ordinances.

g. Documentation indicates the chemical affected the entire plant community in the lake.

h. The small group of Haven Lake landowners who sought and were granted the permit did not have the legal authority to dictate the chemical application.

i. The remaining Haven Lake landowners were not duly notified in 2006 and essentially had no available input to the process

Detailed Explanations of Recommendations:

1) Transparency of Process; Integrating appropriate stakeholders

The current review process relies on the chemical applicator to provide all the requested information in the application form (NOI) and SEPA checklist, which is independent of any external review by WDFW, wetland specialists, county authorities, property owners, etc. To resolve this loophole or problem, a revised permitting and application process should include:

a. A system (such as lake management district statutes) for certifying the legal status of individuals or groups applying for permits for the purpose of "managing a lake".

b. Mail notification to 100% of affected waterfront property owners at the time a "sponsor" and the chemical applicator apply for coverage.

c. Inclusion of consideration for local county jurisdictions by mandating the review of permitting documents, and include county information links on Ecology's "application for permit" website.

d. Inclusion of WDFW review to evaluate all stream, lake, habitat, fishery, wildlife data stated as mitigating factors in the SEPA environmental checklist, and to review implications of chemical usage on each specific lake, water body or habitat from the perspective of the agency as authority.

e. Consideration of all affected stakeholders in the affected water resource prior to granting permits, such as: WDFW, Tribes, DNR heritage program, National Wetland Inventory, any applicable Washington State program such as the Governor's Salmon Recovery Office, etc.

This is not intended to make the process cumbersome, but rather is intended to share the burden of responsibility for all of the above information among all stakeholders invested in managing and protecting a particular water system of the state.

2) Redesigned SEPA Environmental Checklist – Lake Specific

A State Environmental Policy Act (SEPA) is a state policy that requires state and local agencies to consider the likely environmental consequences of a proposal before approving or denying the proposal.

The 'blanket' SEPA used in this instance (Haven Lake, 2006) requested insufficient information to properly evaluate the intent and outcome of the chemicals applied to Haven Lake.

It is clear from this recent situation that there should be a newly designed SEPA checklist intended solely for chemical applications to lakes, and it should specifically consider these elements, which are not part of the current permit review process.

A newly designed SEPA checklist should:

a. Incorporate the current DOE "IAVMP" outline questions into a redesigned SEPA checklist. These questions specifically investigate wetland delineation areas, geology or soils,

hydrology and water testing, accurate plant surveys and distribution maps conducted by independent experts.

b. Include legal landscape questions such as surface water right holders (county and DOE records), county Shoreline Master Plan regulations, county ordinances and WDFW Critical Area Ordinances, and documented legal authority of "sponsoring organization" to apply for the proposed permit

c. Include a detailed map of lake shoreline, bathymetry, wetland areas and all type S and NP streams in and out the lake system.

d. Describe the ecological significance of the lake system, according to scientific definition, i.e., wetland, salmon habitat, DNR designation, USGS information.

e. Include a complete list of "stakeholders" to the water body. Stakeholders will have an affiliation with habitat, wildlife, shoreline, lakebed or water.

f. Include an approval signature from regional WDFW biologists, affected Tribes, and appropriate County planning departments.

g. Include a letter of intent distributed by mailing to all lake residents and other individuals with specific rights with respect to lakes, as opposed to the general public(Note: 71% of Haven Lake property owners live out of the county and have no access to the local paper, therefore locally posted notices are not effective as notification.)

h. Include a clearly understood clause of immediate termination and revocation of the permit at any time in the future for failure to provide complete, accurate information in the SEPA checklist. In addition to what is currently provided regarding falsified information.

3) Addressing Chemical Drift; Chemical "Label" Information; Monitoring Responsibilities

When Diquat was applied to Haven Lake in 2008, it did not behave in the water as claimed by the contractor, and as a result affected an area much greater than provided by the approved plan. We now know from published articles (including one by the DOE staffer responsible in large part for the agency process as it applied to Haven Lake) that chemical drift and persistence far beyond label rates is occurring all across the State of Washington. No studies have been completed on effects of chemical persistence in lakes on fish, salmon or wildlife if persistence occurs beyond the stated label timeline. Essentially, the operator's own decisions become the final word, regardless of the proven response of the chemicals in the water as to drift and persistence.

The drift of chemicals applied directly in water is an expected result, well- recognized by DOE, and should be factored into all decisions assessing the location, plant distribution and total area of chemical treatment. The effect of chemical drift was grossly underestimated by the chemical contractor in 2008 at Haven Lake, for example, and there is no avenue to reverse the result to the plant community.

The recommendations below would help to control the risk of chemical drift and provide for the critical element of monitoring, and should be implemented. These things are not currently in place as part of the permitting process or included in the 2006 "General Permit".

a. Prior to any approved chemical application, exact mitigation requirements should be mandated (barriers, curtains, etc) to reduce or eliminate the effect of chemical drift.

b. Drift, as a legal term, is a term currently used in the "general permit;" it should continue to be used in the permit (although the Dept of Agriculture legal definition only applies to droplets in air), but should very clearly be stated as the "expected chemical movement in water" (facilitated by adjuvants).

c. The most current understanding of how the chemical will react in the environment must be information included in the SEPA,

and should be updated to replace the "label Safety Data information," so it is always current.

d. The geographic nature and water circulation of the lake system should be predetermined and factored into how much and where chemicals are applied. This will help to prevent chemical drift or undesired plant die-off.

e. If the applied chemical herbicide behaves in water contrary to "label specifications" or expected outcomes, the chemical application must be discontinued and any subsequent use be reevaluated and modified based on local conditions.

f. Water and soil testing needs to be mandatory <u>prior</u> to any chemical application. Training manuals for aquatic chemical applicators specifically state that water and lakebed soil conditions can determine the persistence and absorption rate of the chemical, which is unique to each lake.

g. Water and soil testing needs to be mandatory <u>following</u> chemical treatment, and continued until chemical concentrations reach industry safety standards. In lakes with property owners using surface water as domestic supply, water testing for chemical persistence should be required in all lakes regardless of size until water reaches legally defined potability levels (20ug/L). Haven Lake, for example was three acres below the cutoff (for mandatory water testing), although many homes use the lake for domestic supply. The chemical persisted above potable levels 5 days beyond posted 3-day notices to resume water usage. (Herrera Environmental Consultants 2008).

h. Currently, a permit to apply chemical herbicides to a particular lake is transferable by the permitted contractor (without permission of the original sponsor) to any other individual on that lake. <u>Permits should not be transferable.</u>

i. The permit language, "intentionally apply" (pg 8 2 a 4), which addresses drift for individual chemical applications 10' on

either side of a private dock, should be removed. Chemical drift will certainly occur beyond the 10' area, and as such must be considered and factored into the estimated total treatment area. A new definition of drift zone combined with treatment zone should be referred to as "application zone".

j. The permit language (pg 8 2 a.) "Impact on non-target plants is acceptable to the minimum extent…"should be changed to "unacceptable".

4) Revoking of Coverage; Beneficial Uses Protected by Law; Antidegradation Policy and Unintended Impacts;

"Beneficial Uses" protecting Salmon migration, spawning and rearing habitat, and "Antidegradation Policies" are protections supported by legal codes within the Dept of Ecology legal system. Revoking of coverage is a penalty addressed legally within the "general permit" for failure to follow any provisions in that permit.

Specific language within the "general permit" which enforces rather than waters down existing legal protections should be required. Words currently inserted into the document, such as "may revoke" or "if practical" or "intentionally apply" which dilute existing protections should absolutely be removed from permit language, now, as well as in the 2011 rewrite.

For example:

a. Revoking of Coverage, (WAC 173-226-240 Pg 41, general permit) Remove the word "may" and replace with "require Ecology to revoke coverage for violations of any permit terms;". It should then specify the terms that carry mandatory revocation, such as lack of legal authority, failure to specify and comply with other governmental controls, and so on.

b. Beneficial Uses – WAC170-201A-030(1)(B) salmon migration, rearing, spawning other fish migration, rearing, spawning. Enforcing the "50% plant community left alone (unaffected by chemicals)" will provide the protection guaranteed by that statute. Also related to protected salmon habitat is the existing

"antidegradation policy" of the Dept. of Ecology. This should be enforced within the rules of the General Permit.

c. Unintended Impacts (such as effects of "drift") – Applicants should be required to directly address the so called "unintended" but actually "expected" impacts of chemical applications on salmon habitat, property owner rights, etc. and offer mitigation to prevent such impacts. A predictable and expected result such as chemical drift, can no longer be considered "unintended"; especially since drift is addressed on the product label, and is scientifically documented and published by DOE employees in published papers.

d. Antidegradation Policy (fact sheet pg 9 and 10). I suggest removing the word "impractical". Ecology should uphold the antidegradation policy and incorporate such language into general permit as a requirement for all lakes, including the possibility of mitigations.

5) Oversight and Inspection Issues; "The Honor System"; Three different definitions by three agencies of "legal chemical applications" for the same body of water. All are "legal" and unenforceable.

The Honor System

The current 'streamlined' process for approving permits appears to facilitate ease of permit approval, benefitting the sponsor and chemical applicator over all other stakeholders in a lake resource.

The checks and balances previously installed to better protect the water resources of the state were removed when the permit approval process was changed in 2006. Not only has the process been diluted, but an approved permit is now valid for 5 years! Five years in which affected property owners have little recourse to affect change, and the current rules allow for unlimited extensions of the permit as well as "piggy back" or "spinoff" permits for individuals.

The following list outlines responsibilities currently given to chemical applicators based on the "honor system". Costly financial and environmental consequences are the result of this "honor system" approach which leaves most stakeholders barred from contributing to these important determinations.

Chemical applicators now use "the honor system" to oversee the following:

a. All answers required in the SEPA checklist, the mitigating document. Questions address migration, salmon presence, County Shoreline Master Plans, wetland presence, heritage plants or animals, environmental concerns, threatened or endangered species, rivers and stream names and locations.

b. Assess the authority and legal status of "sponsoring organization" and accurately filling out the NOI (notice of intent). This is critical. Lake beds are owned by private parties, or the State. Haven Lake's bed is owned by private parties, either the heir to the developer (who is very much opposed to chemical treatments), or the individual owners of shoreline lots, in slices out to the middle of the lake. The plants are growing from their lake bed property. At Haven Lake, a small group calls itself the Haven Lake Property Owners' Association, and they have done many good things over the years, but they are voluntary and even when they take a vote, they cannot claim to represent anyone who is not actually voting.

   This group applied for and was granted a permit to treat the entire lake, based on the actual votes of a fraction of the total of not only their own members, but also of all owners with rights to use the lake. They continue to assert their right to treat the lake, without any legal authority to do so.

   The Legislature has addressed such issues directly. When the right to treat a lake chemically, or otherwise manage its health, is not held by anyone in particular, then the people with ownership around and near the lake can form a Lake Management District, which solves the problem of authority to treat.

Currently, DOE simply grants permits to people who say they have the right to treat chemically. There is no oversight at all as to whether they actually have any rights to do so.

c. Accurately state the surface acreage of treatment zone and varying depths as well as fill out the post treatment report, determine legal application rate and self report the total gallons of chemical applied. Fill out the end of the year report (for Ecology) for all lakes treated by chemical applicator. The amounts may not match, (ie) Haven Lake

d. Identify species of plants in a lake, determine plant density and distribution pattern in lake, determine treatment area map, calculate the ratio of treatment area to total plant density in accordance with WDFW rules and Dept of Ecology regulations. Determine "eradication vs control" and subsequent amounts of chemical put into lake based on the definition.

e. Apply chemical herbicides to lake plant areas leaving 50% untreated areas in accordance with WDFW regulations and Ecology's "general permit" language which is based on general guidelines of total acreage of lake, as well as language specifying leaving untreated littoral zone representative of total plant community.

f. Arrange and supply replacement water to requesting households whose surface water withdrawals will need to be interrupted due to chemicals in the water for a period of time.

g. Determine the type of chemical herbicide to be used in water body based on factors such as effectiveness on types of plants, persistence in water, presence of salmon and effect of herbicide on salmon, domestic water supply, etc., and presence of wetland or sensitive species.

h. Determine, within herbicide label guidelines, the frequency of herbicide applications over the course of a summer and over the course of each 5-year permit and extension to the permit.

i. Decide on the usage of adjuvants (little study of the effects of adjuvants on wildlife has been conducted).

j. Properly inform the public of pending applications over the course of the application season according to DOE templates.

k. Inform the public of drift or any swimming advisories, domestic water restrictions or animal ingestion restrictions at the time of the Business and Residential notice or other times (without Department of Health and DOE oversight).

Note: All of the above categories could potentially be monitored or verified by authorities during the entire process such as: WDFW, DOE, independent plant surveys conducted by experts , wetland delineation conducted by wetland experts, water testing by Environmental Specialist firms such as Herrera, etc.

Note: We now know, as of 2010, that once an organization sponsors the chemical applicator to obtain a permit for chemical applications to a lake, they then lose control of their authority over the process and cannot execute a NOT (notice of termination) without the chemical applicator's permission. The chemical applicator can "shop" the permit to individuals on the same water body for usage, ensuring the permit stays open in perpetuity. This policy must be reversed.

Three different Definitions of "Legal:"

The gap between DOA and DOE inspection definitions of a "legal chemical application" seems to leave almost no oversight at all. (General Permit treatment acreage vs mitigating SEPA treatment acreage)

Example of maximums for a 69-acre lake. All are "legal" therefore unenforceable.

General Permit: 34 acres @ 68 gallons
This is a legal application according to the Dept of Agriculture

Dept. of Ecology using the NOI and SEPA map: 19 acres @ 38 gallons.
This is a legal application according to the Dept of Ecology

WDFW Hydraulic Regulations: 9.5 acres @ 19 gallons. For 19 total acres of native plants only 9.5 acres should be allowed to be removed from the community (and only within timing windows). This is a legal application according to the Dept. of Fish and Wildlife.

Note: Only the WDFW example requires assessing the total number of plants in a lake at the time of removal. Under the 2006 "General Permit" rules, a lake with only 1 acre of plants can have 34 acres treated "legally" under Ecology and AG inspections. There is no requirement to provide actual statistics of plant acreage or distribution.

Oversight will fix problems with the current "Honor System," Changes within the language of the "General Permit will resolve problems with criteria used in "Site Inspection" of Chemical Applications

a. A Dept. of Ecology " site inspection" of a chemical application to a lake does not include documenting the total amount of chemical, in gallons, applied to the water. The amount of herbicide dispensed into the water "by gallons," will determine the legal amount used. This is critical to determine compliance with the chemical label requirements which subsequently "guarantees" its stated safety to human health and wildlife mortality or damage to salmon olfactory sense.

b. A Dept of Ecology Inspector conducting a "site inspection" relies completely on the "gallon count" of chemicals applied to a lake as "self reported" by the chemical applicator on the post treatment form filled out that day, although the inspector may be standing immediately by. There is no other check on the amount an applicator uses. Certainly, more chemicals might cost more money, but they also might produce more dramatic results which may seem more pleasing to the client.

c. Ecology documents include a lake map delineating chemical treatment zones accompanying approved NOI and SEPA documents, with requirements to leave 50 percent of the representative plant community untreated. However, "site inspections" of chemical herbicide applications by Ecology do not verify the size or locations of total plant community as it relates to the delineating map nor do inspectors verify that the correct percentage of the plant community is left untreated, although it is a requirement in the general permit now. Untreated plants are wildlife habitat and protected by WDFW codes and regulations.

d. Ecology does not verify or inspect the **type** of plants in a lake (noxious, invasive, native) to determine if the herbicide is being used correctly to "eradicate" or "control."

e. A Dept of Agriculture "site inspection" of a chemical application to a lake" will include water testing for chemical levels using instruments to measure the total ug/L amount behind the application boat. This determines if an application is legal according to pesticide label requirements.

f. A DOA chemical application inspection is legally based on FIFRA regulations and "General Permit" terminology only. It is not and cannot be based on the NOI / SEPA map area designated by the Dept. of Ecology as the mitigating document to the "general permit" for that specific lake. That legal language must be specifically stated within the "general permit", according to Robin Shoen-Nessa, area compliance manager for the Department of Agriculture. The mitigating treatment area is smaller than the

maximum amount allowed in the "General Permit" which assumes a worst case scenario of an entire lake choked with native plants.

g. DOA has stated they can only "inspect off a legal document", which is the "General Permit", not the mitigating document (the SEPA).

h. This terminology needs to be changed within the General Permit so that Dept of AG will consider the NOI and SEPA checklist map delineating exact treatment area in acres per lake to be a legally binding document from which they can inspect off to determine a legal application of chemicals according to label requirements and according to DOE guidelines.

i. Problem: Without such a change in the general permit, the problem is that a lake with only a few acres of plants can now receive chemical treatment up to the maximum area allowed by the "general permit" based on total lake acreage only, not on actual existing plant amounts. When judging by maximum allowable acres a lake may not technically be considered "overtreated."

j. In terms of the lake's ability to absorb the chemical herbicide through plants, it is an over-treatment if the lake does not have 34 acres of plants to absorb that much chemical herbicide, and chemicals may linger and not be absorbed by soil or degraded by sunlight.

k. Water testing for chemical amounts behind the application boat over 34 acres may indicate a legal application rate according to allowable label numbers, however, again if the lake does not have 34 acres of plants, then although technically it may be considered "legal," practically there will not be enough plants to absorb herbicide resulting in persistence, damage to the entire plant community or drift to undesirable areas.

l. It is possible (and seems to have happened at Haven Lake) that a chemical application deemed "legal" according to standards set by both the Dept of Agriculture and the Dept of Ecology does not conform to WDFW regulations (leave 50% habitat standing) or

the intent of the "general permit" (leave 50% of representative plant community untreated).

Conclusion:

Thank you for considering the information provided in this analysis, which I hope will result in changes made to the proposed "2011 General Permit" and to adjustments in the 2006 "General Permit". Any permit granted under the rules of the 2006 "General Permit" should be open, now, to audit or review of documents submitted, and any permit to apply chemicals to any lake should be evaluated or reevaluated at any time if conditions indicate the lake system is being degraded or stakeholder rights are compromised in any way.

Permitting regulations must recognize and respect the importance of native plants as salmon habitat, (per WDFW) critical to the future of successful lake systems in Washington State.

"Salmon are an important part of our state's economic base…. so with our economy struggling, this funding ($80 million) is more important than ever. These funds will support research, stewardship and restoration projects that will help restore salmon runs in our state and region." Senator Patty Murray. (3/10/09)

On March 10, 2009 it was announced that Washington State Senator Murray secured an additional $80 million dollars in funding for the Pacific Coastal Salmon Recovery Fund (PCSRF). Haven Lake plays an important role as spawning and rearing habitat for the Washington State commercial salmon and sport fishing industry. Over the past 5 years, more than $140 million for salmon recovery efforts for Washington State alone have been secured. (IAVMP May 2009, M. Harle)

Respectfully,

Monica Harle
Property Owner - Haven Lake, Mason County; 35th District Voter
Property Owner - Kitsap County

Documents

1) 2006 “general permit”
http://www.ecy.wa.gov/programs/wq/pesticides/permit_documents/APAMfinalpermitrevised011509.pdf

2) Fact Sheet
http://www.ecy.wa.gov/programs/wq/pesticides/permit_documents/finalfs.pdf

3) Commentary to “general permit”
http://www.ecy.wa.gov/programs/wq/pesticides/permit_documents/responsetocomments.pdf

4) IAVMP outline
http://www.ecy.wa.gov/programs/wq/plants/management/manual/index.html